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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,767	08/21/2003	Hiroto Okawara	02975.000095.	7077
5514	7590	08/17/2004	EXAMINER	
FITZPATRICK CELLA HARPER & SCINTO			SMITH, ARTHUR A	
30 ROCKEFELLER PLAZA			ART UNIT	
NEW YORK, NY 10112			PAPER NUMBER	

2851

DATE MAILED: 08/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/644,767

Applicant(s)

OKAWARA, HIROTO

Examiner

Arthur A Smith

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 August 2003.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-5 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 21 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9/26/03.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Tsukamoto et al. (US 5204710).

In reference to claims 1 and 5, Tsukamoto et al. discloses a lens control apparatus, ref. 9, that outputs, to a driving unit, ref. 10, that drives a lens in an optical axis direction, a driving signal for moving the lens, col. 3 lines 57-64, the lens control apparatus comprising: a position sensor, ref. 18, that outputs a detection signal that changes periodically in accordance with a movement of the lens, col. 4 lines 22-29; a first calculation unit that calculates a differential value between a phase component of position detection data that have been obtained based on a detection signal of the position sensor when the lens has been moved to a predetermined reference position and a phase component of position control data for controlling the position of the lens and corresponding to the reference position, col. 6 lines 3-12; a second calculation unit that calculates the target position in the position control data based on the position detection data and the differential value, col. 7 lines 4-9; and a control circuit that outputs the driving signal based on the differential value and the target position in the position control data, col. 7 lines 9-17.

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In reference to claim 2, Tsukamoto et al. discloses wherein the position sensor comprises a magnet member that is periodically magnetized, and a magnetic detector that moves relative to the magnet member when the lens is moved and that outputs a plurality of the position detection signals having different phases, in response to magnetic changes due to that movement, col. 19 lines 49-55 (Although reference is made only to the zoom encoder, ref. 16, the zoom encoder and the focus encoder are both the same type of encoders and thus both could be replaced by magnetic detectors).

In reference to claim 4, Tsukamoto et al. discloses a camera comprising; a lens; a driving unit that drives the lens in an optical axis direction, and a lens control apparatus according to claim 1, col. 1 lines 1-14.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsukamoto et al. (US 5204710) in view of Hirasawa (US 5406345).

In reference to claim 3, Tsukamoto et al. discloses all the limitations of the parent claim as discussed above. Tsukamoto et al. does not disclose wherein the position sensor comprises an optical scale member having a reflection surface whose shape changes periodically, and an optical detector that moves relative to the optical scale

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member when the lens is moved and that outputs a plurality of the position detection signals having different phases, in response to a received light amount among light that has been projected to and reflected by the scale member, which changes due to the movement. Hirasawa discloses wherein the position sensor comprises an optical scale member having a reflection surface whose shape changes periodically, and an optical detector that moves relative to the optical scale member when the lens is moved and that outputs a plurality of the position detection signals having different phases, in response to a received light amount among light that has been projected to and reflected by the scale member, which changes due to the movement. It would have been obvious to one of ordinary skill in the art at the time of the invention to realize that the lens control device of Tsukamoto et al. could have been provided with optical detector as described by Hirasawa instead of an encoder. This would be done since Tsukamoto et al. recognizes that different detectors other than an encoder could be used, see col. 19 lines 49-55 and Hirasawa teaches that in replacement of an encoder and optical detector is equivalent, col. 5 lines 26-33.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kaneda (US 6115552) and Ohtake (US 5687403) show the state of the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arthur A Smith whose telephone number is (571) 272 2129. The examiner can normally be reached on Monday - Thursday from 8:00 AM to

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5:30 PM. The examiner can also be reached on alternate Fridays during the same hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (572) 272 2258. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Arthur A. Smith
August 12, 2004